

**IN THE CLAIMS**

**Claim 1 (currently amended):**

1           1. An optical device comprising:  
2           an optical source for pumping input optical radiation centered around an  
3           input wavelength; and  
4           at least one adjustable output coupler, coupled with the optical source, for  
5           controlling the input optical radiation at one or more output wavelengths  
6           wherein the at least one adjustable output coupler is coated with a metal  
7           coating in such a way that the reflectivity of the at least one adjustable output  
8           coupler varies in response to applying stress, heat or electrical power to the  
9           metal coating.

**Claim 2 (canceled)**

**Claim 3 (canceled)**

**Claim 4 (original):**

1           4. The optical device of Claim 3, wherein the reflectivity of the at least one  
2           adjustable output coupler varies in response to a control signal.

**Claim 5 (original):**

1           5. The optical device of Claim 3, further comprising:  
2           at least one set of optical gratings, each optical grating of the set  
3           converting the pumped optical radiation to wavelengths greater than or equal to  
4           the input wavelength.

**Claim 6 (original):**

1           6. The optical device of Claim 5, wherein each optical grating of the set  
2           comprises a chirped or an unchirped design, and the output wavelengths are  
3           greater than the input wavelength.

**Claim 7 (original):**

1           7. The optical device of Claim 6, wherein each optical grating of the set  
2 has a reflectivity of about one-hundred percent or less.

**Claim 8 (currently amended):**

1           8. A cascaded Raman resonator comprising:  
2           an optical source for pumping optical radiation centered around an input  
3 wavelength;  
4           at least one set of optical gratings for converting the pumped optical  
5 radiation to wavelengths other than the input wavelength; and  
6           at least one adjustable output coupler for controlling the power of the  
7 optical radiation propagating from the at least one set of optical gratings at the  
8 wavelengths other than the input wavelength  
9           wherein the at least one adjustable output coupler is coated with a metal  
10 coating in such a way that the reflectivity of the at least one adjustable output  
11 coupler varies in response to applying stress, heat or electrical power to the  
12 metal coating.

**Claim 9 (canceled)**

**Claim 10 (canceled)**

**Claim 11 (original):**

1           11. The cascaded Raman resonator of Claim 10, wherein the reflectivity of  
2 the at least one adjustable output coupler varies in response to a control signal.

**Claim 12 (original):**

1           12. The cascaded Raman resonator of Claim 10, wherein each optical  
2 grating of the at least one set comprises a chirped or an unchirped design, and  
3 wherein the wavelengths other than the input wavelength are greater than the  
4 input wavelength.

**Claim 13 (original):**

1           13. The cascaded Raman resonator of Claim 12, wherein each optical  
2 grating of the at least one set has a reflectivity of about one-hundred percent or  
3 less.

**Claim 14 (original):**

1           14. The cascaded Raman resonator of Claim 12, wherein the at least one  
2 set of optical gratings and the at least one adjustable output coupler are written  
3 into or spliced onto an optical waveguide.

**Claim 15 (currently amended):**

1           15. A multi-wavelength cascaded Raman resonator comprising:  
2 an optical source for pumping optical radiation centered around an input  
3 wavelength; and  
4 a Raman optical fiber comprising:  
5 at least a first set of optical gratings for converting the pumped  
6 optical radiation to wavelengths other than the input wavelength; and  
7 at least one adjustable output coupler having a variable reflectivity  
8 for controlling the power of the optical radiation propagating from the at least one  
9 set of optical gratings at the wavelengths other than the input wavelength  
10 wherein the at least one adjustable output coupler is coated with a  
11 metal coating in such a way that the reflectivity of the at least one adjustable  
12 output coupler varies in response to applying stress, heat or electrical power to  
13 the metal coating.

**Claim 16 (canceled)**

**Claim 17 (original):**

1           17. The multi-wavelength cascaded Raman resonator of Claim 16, further  
2 comprising at least a second set of optical gratings for converting the pumped  
3 optical radiation to wavelengths other than the input wavelength.

**Claim 18 (original):**

- 1           **18.** The multi-wavelength cascaded Raman resonator of Claim 17,
- 2           wherein each optical grating of the at least first and second sets comprise a
- 3           chirped or an unchirped design, and wherein the wavelengths other than the
- 4           input wavelength are greater than the input wavelength.

**Claim 19 (original):**

- 1           **19.** The multi-wavelength cascaded Raman resonator of Claim 18,
- 2           wherein each optical grating of the at least first and second sets has a reflectivity
- 3           of about one-hundred percent or less.

**Claim 20 (original):**

- 1           **20.** The multi-wavelength cascaded Raman resonator of Claim 19,
- 2           wherein the at least first and second sets of optical gratings and the at least one
- 3           adjustable output coupler are written into or spliced onto the Raman optical fiber.